**The answers to the referee reports**

**The referee 1(A).**

1. On page 2, line 48-55: A few sentences have been added to the end of introduction section on why this copolymer was select as a working topic. in this study, These are:

“This condensation copolymer contains functional groups, in its main chain, such as ether, hydroxyl, amine groups, aromatic rings, and epoxide groups at the chain ends. It has been synthesized with the thought that a copolymer with these functional groups and its MWCNT composites will may exhibit interesting electrical and thermal properties.”

1. Since this copolymer is not soluble in THF, the GPC technique could not be used to determine the molecular weight. Since the proton signals belonging to the end groups coincide with the proton signals in the piperazine ring, the 1H NMR technique also could not be used for molecular weight determination by end group analysis. Perhaps some calculations can be made from the differences between the integral heights of the signals between 2.2-3.0 ppm including the end epoxide protons and the integral height of the proton signals not found in the end group, but I do not think it will be reliable. Such a calculation was not made for this reason.
2. On Figure 7, page 14, TGA curve that matrix copolymer and composite with 2% of MWCNT have weight loss of 91.7 % and 89.2 % at 500 oC, not 30 %.

 On page 13, line 270-272 :As the reason for decrease of thermal stability of nanocomposites according to the temperature at which decomposition begins, the following sentence has been added to the text:

“Probably, the radicals which have remained within the MWCNT during the oxidation have initiated decompose of the polymer at a lower temperature.”

**The answers to the additional comments**

Page 8-9, line 185-192, limiting viscosity number from chloroform solution was determined and put in the text.

Since this copolymer is not soluble in THF, the GPC technique could not be used to determine the molecular weight. Since the proton signals belonging to the end groups coincide with the proton signals in the piperazine ring, the 1H NMR technique also could not be used for molecular weight determination by end group analysis. Perhaps some calculations can be made from the differences between the integral heights of the signals between 2.2-3.0 ppm including the end epoxide protons and the integral height of the proton signals not found in the end group, but I do not think it will be reliable. Such a calculation was not made for this reason.

**The referee 2(B).**

1. On page 2, line 48-55: A few sentences have been added to the end of introduction section on why this copolymer was selected as a working topic in this study.

 These are :

“This condensation copolymer contains interesting functional groups, in its main chain, such as ether, hydroxyl, amine groups, aromatic rings, and epoxide groups at the chain ends. It has been synthesized with the thought that a copolymer with these functional groups and its MWCNT composites will may exhibit interesting electrical and thermal properties.”

1. PO in the given text „PO/phenol 1“ is the abbreviation of propylene oxide. PO/phenol 1 is given as a property of “bisphenol A propoxylate diglycidyl ether” in Sigma-Aldrich.

Definition of the abbreviation PO has has been added on page 3, in line 59, as “propylene oxide”

1. For IR spectra, “using KBr disc in range of 4000-450 cm-1.” statement was added to the text, on page 4, in line 110.

For SEM photographs, the magnification for every image has been added to the caption of Figure 3, on page 8, in between line 184-185. The sentence in the Measurements section (on page 5, in line 124-126) was reorganized as follows:

Scanning electron microscopy (SEM) images were used to examine the distribution in the composite materials of nanoparticles, and they were taken with a Jeol JSM-7001F instrument from gold coated powder samples.

1. In stead of MWCNT-COOH and MWCNT-NH2 were used oxidized MWCNT and aminated MWCNT, respectively, in all texts and figures ( For example, on page 1, in line 7; on page 4, in line 98,99; on figures 1, 7, on page 6, 14, respectively, etc).
2. Since this copolymer is not soluble in THF, the GPC technique could not be used to determine the molecular weight. Since the proton signals belonging to the end groups coincide with the proton signals in the piperazine ring, the 1H NMR technique also could not be used for molecular weight determination by end group analysisi. Perhaps some calculations can be made from the differences between the integral heights of the signals between 2.2-3.0 ppm including the end epoxide protons and the integral height of the proton signals not found in the end group, but I do not think it will be reliable. Such a calculation was not made for this reason.
3. FT-IR spectra and TGA curve of the mixture of aminated MWCNT and oxidized MWCNT have been added to Figure 1 and Figure 7, respectively (answer of this part was given in answer 4)

On page 5, in line 129-140 for FT-IR: Some sentences about the spectra were added to the text.

On page 13, in lines 264-269, for TGA curve: Some sentences about the curve were added to the text.

1. The decrease in the intensity of the vibration bands of the epoxide groups was also confirmed by absorbance measurements. In the text, on page 6, in line 154, "some part of" is added in front of the epoxide ring. in the sentence (in line 153) “This is probably due to opening by the acid and amine groups of the epoxide ring”, that is, the new sentence: This is probably due to opening by the acid and amine groups of some part of the epoxide ring
2. In the section “thermal investigation”, on page 13, in line 266: the phrase “at which the rapid decomposition begins” has been added to the first sentence as definition of “ initial decomposition temperature”. In addition, in Table 2, on page 13: Ti, Tsecd and Ttrd were also defined in the footnote.
3. On page 14, in line 282-284: Tg values have been obtained during first heating cycle. You are right about the obtained Tg values of the composites, they are significantly lower compared to that of the copolymer. Hydrogen bonds and dipole interactions between the copolymer molecules breaks down as the acid and amine groups at ends of MWCNT interact with the hydrogen bond throughout the chain of the copolymer. This event leads to an increase in free volume in the copolymer, since the copolymer chains are separated from each other, and as a results the Tg value may have decreased considerably.

These results were discussed in the text.

**The answers to additional comments**

The page numbers and line numbers for suggested corrections have been given above.

1. Page 2, in line 33,34 : The term “nanoscale microstructure” has been used for very small structures ( Acta materials 59(14), 2011, 5511-5522).

The term “multi-functional properties” means properties of substances containing together some functional groups. This term also is used some publications ( For example; the book named “ Bulk Nanostructured Materials with Multifunctional Properties” Authors: Sabirov, I., Enikeev, N.A., Murashkin, M.Y., Valiev, R.Z., 2015).

The term “strong interaction with the matrix” means the interactions between matrix polymer and nanostructures.

1. Under conclusions, on page 15, in line 310,311 : The sentence “The increase in dielectric constant with MWCNT content is an indication that these composites can be used as capacitors” has been added for the application area of the investigated composites.
2. On page 2, line 48: The term “interesting” was removed from the text.
3. On page 3, line 59 :PO has been defined.
4. In the investigated polymer, there are the amine groups that can easily be interacted with the oxidized MWCNT, and there are the etheric groups that can easily be interacted with the aminated MWCNT.

For this reason, MWCNTs containing two different functional groups have been used together.

1. On page 5, in line 132 : The wavelength unit (cm-1) was added.
2. The weight loss of 5% is due to the volatilization of substances such as solvents, precipitants, etc, not to be decomposition. I think that the definition of initial decomposition temperature is correct.

For initial decomposition temperature, *TIDT,* was used instead of *Ti.*.

1. On page 13, in Table II, the related units were added (as % by weight)
2. Now, the second heating cycle cannot be done.
3. The English grammar and syntax was checked up.